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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,690	07/28/2004	Chun-Yuan Chen	AUOP0041USA	4689
27765	7590	05/09/2006	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116			SHALLENBERGER, JULIE A	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 05/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

5/

<b>Office Action Summary</b>	<b>Application No.</b> 10/710,690	<b>Applicant(s)</b> CHEN ET AL.	
	<b>Examiner</b> Julie A. Shallenberger	<b>Art Unit</b> 2875	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (2002/0064037) in view of Vollkommer et al. (6,853,124) and further in view of Park (2005/0127848).

Lee discloses a backlight module 100 for a dual sided display having two parallel liquid crystal display panels 118 and 128 comprising a plurality of external electrode fluorescent lamps 102 positioned between the two LCD display panels, and two diffusion plates 110 and 120 positioned between the two LCD display panels and fixed to frame 108, but lacks the teaching of a flat fluorescent lamp fixed to the frame and the first and second electrodes being external and electrically connected in parallel.

Vollkommer teaches a flat fluorescent lamp fixed to frame 9, and the use of external electrodes so that there is no need to lead gas-tight electrical feedthroughs through the wall of the discharge vessel (col. 1 lines 37-43).

Park teaches a plurality of fluorescent lamps connected in parallel [0013] for improving uniform luminescence and to reduce manufacturing costs as well as power consumption.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the dual display of Lee with the external electrodes of Vollkommer and the

parallel wiring of Park, in order to improve the safety and performance of the display, reduce manufacturing cost, and provide uniform brightness.

Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee, Vollkommer, and Park in view of Shibata (5,648,858).

In regard to claim 2, Shibata teaches an inverter electrically connected to the electrodes for supplying AC voltage.

In regard to claim 3, Vollkommer teaches the use of a pulsed voltage source 23 for high efficiency in generating radiation (col. 2 lines 5-32) and further discloses that the lighting system can be operated using unipolar and bipolar pulsed voltages (col.9 lines 46-51) of two associated poles of the voltage source (col.11 line 30).

In regard to claims 4 and 5, Shibata teaches the use of aluminum coated electrodes for the purpose of conducting (col. 7 lines 10-54).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions of Lee, Vollkommer, and Park, with Shibata's aluminum electrodes and an inverter for connecting the device to AC because aluminum is a very cost efficient conductive material and AC voltage is a common source of power in any house or building.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hinotani (4,920,298) discloses a flat fluorescent lamp for a liquid crystal display.

Hur (2004/0232853) teaches fluorescent lamps in a backlight unit htat are connected in parallel.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie A. Shallenberger whose telephone number is (571)272-7131. The examiner can normally be reached on Monday - Friday 830-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Renee Luebke can be reached on 571-272-2009. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Julie Shallenberger  
Examiner  
AU 2875



RENEE LUEBKE  
PRIMARY EXAMINER